

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|---|----------|------------------|---------|------------------|
| L1 | 0 | (piston or plunger) and ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | IBM_TDB | OR | ON | 2005/06/22 18:21 |
| L2 | 45 | (piston or plunger) same ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | US-PGPUB | OR | ON | 2005/06/22 19:31 |
| L3 | 21 | (piston or plunger) and ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | EPO | OR | ON | 2005/06/22 18:21 |
| L4 | 29 | (piston or plunger) and ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | JPO | OR | ON | 2005/06/22 18:21 |
| L5 | 85 | (piston or plunger) and ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | DERWENT | OR | ON | 2005/06/22 18:24 |
| L6 | 118 | (piston or plunger) and ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | USOCR | OR | ON | 2005/06/22 18:21 |
| L7 | 82 | (piston or plunger) with ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | USOCR | OR | ON | 2005/06/22 18:21 |
| L8 | 276 | (piston or plunger) same ((sensor or sensing or sense or sensed) with cylinder with (seal or sealed or sealing or sealant)) | USPAT | OR | ON | 2005/06/22 18:22 |
| L9 | 1 | us-20040083831-.did. | DERWENT | OR | ON | 2005/06/22 18:24 |
| L10 | 1 | 2004-378485.NRAN. | DERWENT | OR | ON | 2005/06/22 18:34 |
| L11 | 6 | 2 and ((73/7 or 73/865.9 or 73/168 or 73/116 or 73/119R or 324/207.24 or 92/5r).ccls. or (g01n003/56 or g01b007/14 or g01b021/16 or g01b007/00 or g01b021/00 or g01d007/00 or g01m015/00 or g01m013/00 or g01m019/00 or f02d035/00 or fo4b051/00).ipc.) | US-PGPUB | OR | ON | 2005/06/22 20:07 |

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|-----|----|---|-----------------|----|----|------------------|
| L12 | 1 | 3 and ((73/7 or 73/865.9 or 73/168 or 73/116 or 73/119R or 324/207.24 or 92/5r).ccls. or (g01n003/56 or g01b007/14 or g01b021/16 or g01b007/00 or g01b021/00 or g01d007/00 or g01m015/00 or g01m013/00 or g01m019/00 or f02d035/00 or fo4b051/00).ipc.) | EPO | OR | ON | 2005/06/22 18:48 |
| L13 | 2 | 4 and ((73/7 or 73/865.9 or 73/168 or 73/116 or 73/119R or 324/207.24 or 92/5r).ccls. or (g01n003/56 or g01b007/14 or g01b021/16 or g01b007/00 or g01b021/00 or g01d007/00 or g01m015/00 or g01m013/00 or g01m019/00 or f02d035/00 or fo4b051/00).ipc.) | JPO | OR | ON | 2005/06/22 18:52 |
| L14 | 8 | 5 and ((73/7 or 73/865.9 or 73/168 or 73/116 or 73/119R or 324/207.24 or 92/5r).ccls. or (g01n003/56 or g01b007/14 or g01b021/16 or g01b007/00 or g01b021/00 or g01d007/00 or g01m015/00 or g01m013/00 or g01m019/00 or f02d035/00 or fo4b051/00).ipc.) | DERWENT | OR | ON | 2005/06/22 18:56 |
| L15 | 2 | 6 and ((73/7 or 73/865.9 or 73/168 or 73/116 or 73/119R or 324/207.24 or 92/5r).ccls. or (g01n003/56 or g01b007/14 or g01b021/16 or g01b007/00 or g01b021/00 or g01d007/00 or g01m015/00 or g01m013/00 or g01m019/00 or f02d035/00 or fo4b051/00).ipc.) | USOCR | OR | ON | 2005/06/22 18:58 |
| L16 | 27 | 8 and ((73/7 or 73/865.9 or 73/168 or 73/116 or 73/119R or 324/207.24 or 92/5r).ccls. or (g01n003/56 or g01b007/14 or g01b021/16 or g01b007/00 or g01b021/00 or g01d007/00 or g01m015/00 or g01m013/00 or g01m019/00 or f02d035/00 or fo4b051/00).ipc.) | USPAT | OR | ON | 2005/06/22 19:25 |
| L17 | 3 | ("4143319" or "4987774" or "6318147").pn. | USPAT | OR | ON | 2005/06/22 19:28 |
| L18 | 1 | jp-62151703-\$.did. | JPO; DERWENT | OR | ON | 2005/06/22 19:30 |
| L19 | 1 | de-2543078-\$.did. | EPO; DERWENT | OR | ON | 2005/06/22 19:30 |

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|-----|----|---|----------|----|----|------------------|
| L20 | 28 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) | US-PGPUB | OR | ON | 2005/06/22 19:43 |
| L21 | 7 | (((piston or plunger) same (sealed or seal or sealing or sealant)) or (92/5r.ccls. and (seal or sealed or sealing or sealant))) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24.ccls.) | US-PGPUB | OR | ON | 2005/06/22 19:57 |
| L22 | 32 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) | EPO | OR | ON | 2005/06/22 19:44 |
| L23 | 1 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) and (sealed or seal or sealing or sealant) | EPO | OR | ON | 2005/06/22 19:44 |
| L24 | 0 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) and (sealed or seal or sealing or sealant) | JPO | OR | ON | 2005/06/22 19:45 |
| L25 | 14 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) | JPO | OR | ON | 2005/06/22 19:44 |
| L26 | 11 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) and (sealed or seal or sealing or sealant) | DERWENT | OR | ON | 2005/06/22 19:50 |
| L27 | 1 | 1993-296208.NRAN. | DERWENT | OR | ON | 2005/06/22 19:47 |
| L28 | 0 | ((piston or plunger) or 92/5r.ccls.) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24. ccls.) and (sealed or seal or sealing or sealant) | USOCR | OR | ON | 2005/06/22 19:50 |
| L29 | 44 | (((piston or plunger) same (sealed or seal or sealing or sealant)) or (92/5r.ccls. and (seal or sealed or sealing or sealant))) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24.ccls.) | USPAT | OR | ON | 2005/06/22 19:51 |

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|---|----------|------------------|---------|------------------|
| L1 | 17 | ((piston or plunger) same (cylinder with (sealed or seal or sealing or sealant))) or (92/5r.ccls. and (cylinder with (seal or sealed or sealing or sealant))) and 324/207.24.ccls. | USPAT | OR | ON | 2005/06/23 13:04 |
| S30 | 25 | ((piston or plunger) same (cylinder with (sealed or seal or sealing or sealant))) or (92/5r.ccls. and (cylinder with (seal or sealed or sealing or sealant))) and ((g01b021/16 or g01b007/14).ipc. or 324/207.24.ccls.) | USPAT | OR | ON | 2005/06/22 19:58 |
| S31 | 0 | ((piston or plunger) same (sealed or seal or sealing or sealant)) or (92/5r.ccls. and (seal or sealed or sealing or sealant))) and 324/207.26.ccls. | US-PGPUB | OR | ON | 2005/06/22 19:57 |
| S32 | 0 | ((piston or plunger) same (sealed or seal or sealing or sealant)) or (92/5r.ccls. and (seal or sealed or sealing or sealant))) and 324/207.26.ccls. | EPO | OR | ON | 2005/06/22 19:57 |
| S33 | 0 | ((piston or plunger) same (sealed or seal or sealing or sealant)) or (92/5r.ccls. and (seal or sealed or sealing or sealant))) and 324/207.26.ccls. | JPO | OR | ON | 2005/06/22 19:57 |
| S34 | 0 | ((piston or plunger) same (sealed or seal or sealing or sealant)) or (92/5r.ccls. and (seal or sealed or sealing or sealant))) and 324/207.26.ccls. | USOCR | OR | ON | 2005/06/22 19:58 |
| S35 | 15 | ((piston or plunger) same (cylinder with (sealed or seal or sealing or sealant))) or (92/5r.ccls. and (cylinder with (seal or sealed or sealing or sealant))) and ((g01b021/16 or g01b007/14).ipc. or 324/207.26.ccls.) | USPAT | OR | ON | 2005/06/23 13:03 |
| S36 | 0 | S2 and 324/207.26.ccls. | US-PGPUB | OR | ON | 2005/06/22 20:08 |
| S37 | 0 | S3 and 324/207.26.ccls. | EPO | OR | ON | 2005/06/22 20:09 |
| S38 | 0 | S4 and 324/207.26.ccls. | JPO | OR | ON | 2005/06/22 20:10 |
| S39 | 0 | S6 and 324/207.26.ccls. | USOCR | OR | ON | 2005/06/22 20:11 |
| S40 | 0 | S8 and 324/207.26.ccls. | USPAT | OR | ON | 2005/06/23 13:02 |

DERWENT-ACC-NO: 1977-C7836Y

DERWENT-WEEK: 197714

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TITLE: Inductive transducer for
measuring small mechanical
offsets - checks internal
combustion engine piston ring
conditions in situ

PATENT-ASSIGNEE: VIBRO-METER SA[VIBRN]

PRIORITY-DATA: 1975DE-2543078 (September 26, 1975)

PATENT-FAMILY:

| PUB-NO | PAGES | PUB-DATE |
|---------------------|-------|----------------|
| LANGUAGE | | MAIN-IPC |
| <u>DE 2543078 A</u> | 000 | March 31, 1977 |
| N/A | | N/A |
| <u>DE 2543078 B</u> | 000 | March 29, 1979 |
| N/A | | N/A |

INT-CL (IPC): G01B007/14, G01D005/20

ABSTRACTED-PUB-NO: DE 2543078A

BASIC-ABSTRACT:

An inductive transducer is for checking the magnitude of small mechanical offsets between metal parts, such as the offsets between the rings and the cylinder walls of an internal combustion engine.

The condition of such piston rings can be checked in situ. by such a transducer without the need for engine down time.

The transducer consists of a metallic core (2) surrounded by a suitable coil (3) with terminal wires (5), mounted in an outer cylindrical shell (1) and provided with suitable pieces (4) of non magnetic material. Various forms of construction are used, and the transducer is typically contained in an outer chassis (11) which can be screwed through a cylinder block (27) with a seal (34) against the cooling water in the block, near the piston rings (29).

DERWENT-CLASS: S02